

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-4. (Cancelled)

5. (Currently amended) A method for controlling an air-fuel ~~ratio~~ mixture in an internal combustion engine, comprising:

determining a temperature of a downstream emission control device ~~downstream of said engine~~, said downstream emission control device located following an upstream emission control device;

oxidizing hydrocarbons stored in said downstream emission control device when said temperature of said downstream emission control device is greater than a predetermined temperature by providing an air amount in a location following said upstream emission control device and before said downstream emissions device; and

adjusting the air/fuel ratio in the engine rich of stoichiometry during oxidation of said hydrocarbons.

6. (Currently amended) The method of claim 5, wherein said ~~oxidation step comprises providing air from an air supply device to an exhaust stream upstream of said emission control device~~ oxidizing hydrocarbons is accomplished by providing a sufficient air mass to said downstream device without lowering the temperature of said downstream device below a predetermined threshold.

7. (Original) The method of claim 6, wherein said air supply device is an air pump.

8. (Cancelled)

9. (Currently amended) A system ~~for~~ controlling an air-fuel ratio in an internal combustion engine, comprising:

a hydrocarbon trap positioned in an exhaust path downstream of ~~the engine~~ a first emission control device, said first emission control device being located downstream of said engine;

~~an air supply device capable of delivering air to said exhaust path positioned downstream of said first emission control device to supply air upstream of said hydrocarbon trap for oxidizing hydrocarbons stored in said trap; and~~

101
~~a controller configured to induce said device to deliver said air to said trap when said temperature signal indicates a temperature of said trap~~ activate said air supply device, delivering oxygen to said hydrocarbon trap when temperature of said hydrocarbon trap is greater than a predetermined temperature, said controller further configured to adjust an air/fuel ratio in ~~the~~ said engine rich of stoichiometry during said air delivery.

10. (Original) The system of claim 9, wherein said air supply device is an air pump.

11. (Previously presented) A method for controlling an engine, said engine communicating with a first emission control device, said first emission control device communicating with a second emission control device, said method comprising:

determining a temperature of said second emission control device;

combusting an air-fuel mixture rich of stoichiometry in an engine cylinder to reduce NOx stored in said first emission control device; and

applying oxygen upstream of said second emission control device to oxidize hydrocarbons stored in said second emission control device and hydrocarbons from said combusted rich air-fuel mixture when said temperature of said second emission control device is greater than a predetermined temperature.

12-13. (Cancelled)

14. (New) The method of Claim 5 wherein said air-fuel is adjusted by providing a bias to a desired air-fuel ratio.

15. (New) The method of Claim 14 wherein said bias is based on an air mass in the intake manifold.

16. (New) The method of Claim 5 wherein said air amount is increased as engine load increases.

17. (New) A method for controlling an air-fuel mixture in an internal combustion engine, comprising:

determining a temperature of a downstream emission control device located following a upstream emissions control device;

oxidizing hydrocarbons stored in said downstream device when said temperature of said downstream device is greater than a predetermined temperature by providing a predetermined air mass in a location following said upstream emissions control device and before said downstream emissions device; and

adjusting the air-fuel ratio in the engine rich of stoichiometry during oxidation of said hydrocarbons.

18. (New) The method of claim 17 wherein said oxidizing hydrocarbons is accomplished by providing a sufficient air mass to said downstream device without lowering the temperature of said downstream device below a predetermined threshold.

19. (New) The method of Claim 17 wherein said air-fuel is adjusted by providing bias to a desired air-fuel ratio.

20. (New) The method of Claim 19 wherein said bias is based on an air mass in the intake manifold.

21. (New) The method of Claim 17 wherein said predetermined air mass is provided by an air pump.